



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,077	10/16/2003	Kyoung-Woo Lee	9898-326	8142

20575 7590 07/25/2006

MARGER JOHNSON & MCCOLLOM, P.C.  
210 SW MORRISON STREET, SUITE 400  
PORTLAND, OR 97204

EXAMINER

GUERRERO, MARIA F

ART UNIT PAPER NUMBER

2822

DATE MAILED: 07/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/688,077

Applicant(s)

LEE ET AL.

Examiner

Maria Guerrero

Art Unit

2822

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,4-10 and 23-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 is/are allowed.
- 6) ☒ Claim(s) 23-26 is/are rejected.
- 7) ☒ Claim(s) 4-10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This Office Action is in response to the Amendment and the Request for continued examination filed July 17, 2006.

### **Status of Claims**

2. Claims 2-3 and 11-22 are canceled. Claims 1, 4-10 and 23-26 are pending.

### ***Continued Examination Under 37 CFR 1.114***

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 17, 2006 has been entered.

### ***Priority***

4. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claim 25-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Johnson et al. (U.S. 6,534,374).

Johnson et al. teaches a method of manufacturing an MIM capacitor, which includes a lower electrode, a first wiring layer that is located below or in the same level with the lower electrode and is insulated from the lower electrode and an upper electrode that overlaps with the lower electrode and contacts the first wiring layer through a contact hole in the dielectric layer that is between the upper electrode and the lower electrode (Fig. 1, 9-10, col. 5, lines 6-60, col. 7, lines 45-67). Johnson et al. shows forming a dielectric layer on the entire surface of a substrate on which the lower electrode and the first wiring layer are formed (Fig. 1, 3, 8-10, col. 5, lines 32-60, col. 7, lines 45-67). Johnson et al. discloses patterning the dielectric layer to form a contact hole through which the surface of the first wiring layer is exposed and forming the upper electrode to contact the first wiring layer through the contact hole (Fig. 1, 9-10, col. 7, lines 45-67, col. 8, lines 15-30). Johnson et al. teaches forming a conductive layer on

the dielectric layer and within the contact hole and patterning the conductive layer to complete the upper electrode (Fig. 9-10).

6. Claims 23-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Merchant et al. (US 6,784,478).

Merchant et al. teaches a method of manufacturing an MIM capacitor, which includes a lower electrode, a first wiring layer that is located at or below a bottom surface of the lower electrode and is insulated from the lower electrode and an upper electrode that overlaps with the lower electrode and contacts the first wiring layer through a contact hole in the dielectric layer that is between the upper electrode and the lower electrode (Fig. 1-6, col. 3, lines 1-67, col. 4, lines 18-67, col. 5, lines 1-45).

Merchant et al. shows forming a dielectric layer on the entire surface of a substrate on which the lower electrode and the first wiring layer are formed (Fig. 1-6, Abstract, col. 3, lines 1-67, col. 4, lines 18-67, col. 5, lines 1-45). Merchant et al. discloses patterning the dielectric layer to form a contact hole through which the surface of the first wiring layer is exposed and forming the upper electrode to contact the first wiring layer through the contact hole (Fig. 1, 9-10, col. 7, lines 45-67, col. 8, lines 15-30). Merchant et al. teaches forming the upper electrode comprising a material to contact the first wiring layer through the contact hole (Fig. 1-6, Abstract, col. 3, lines 1-67, col. 4, lines 18-67, col. 5, lines 1-45).

***Claim Objections***

7. Claims 4-10 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The claims are depending directly or indirectly from the canceled claims 2 and 3.

***Allowable Subject Matter***

8. Claim 1 is allowed.

***Terminal Disclaimer***

9. The terminal disclaimer filed on July 17, 2006 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. patent No. 6,989,313 has been reviewed and is accepted. The terminal disclaimer has been recorded.

***Response to Arguments***

10. Applicant's arguments with respect to claims 23-26 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maria Guerrero whose telephone number is 571-272-1837.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zandra Smith can be reached on 571-272-2429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

July 20, 2006

*Maria Guerrero*  
**MARIA F. GUERRERO**  
**PRIMARY EXAMINER**